

EXPANDER DEVICE AND METHOD FOR RESETTING BUS SEGMENTS IN I/O SUBSYSTEM SEGMENTED WITH EXPANDERS

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ABSTRACT OF THE DISCLOSURE

Expander device and method for resetting bus segments in I/O subsystem to clear bus hang in an I/O subsystem having a plurality of bus segments. Each bus segment in the I/O subsystem includes a set of devices and a bus that is coupled to the set of devices. In addition, the I/O subsystem includes at least one expander, each expander being arranged to couple a pair of buses for propagating communication signals. A reset signal is asserted on a first bus segment. In response to the reset signal, each expander coupled to the first bus segment and each device in the first bus segment reset themselves. Additionally, each expander coupled to the first bus segment isolates the reset signal such that the reset signal is not propagated to the other bus segments. For each expander coupled to the first bus segment, all communication signals are isolated such that each expander prevents propagation of the communication signals between the first bus and other bus. Then, it is determined whether the other bus is no longer hung for each expander coupled to the first bus segment. If the other bus is still hung, each expander issues a far-side reset signal on the other bus to reset the other bus. However, if the other bus is not hung, communication signals are allowed to propagate between the first bus and the other bus.